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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention relates to improvement of a facsimile machine.

[0002]

[Description of the Prior Art]As for the numerals/decoding circuit for performing the numerals of drawing data, and decoding processing, although the thing various type as a facsimile machine is developed and proposed recently, it is common that two are provided in one set of a facsimile machine. If two numerals / decoding circuits are provided, multi-functionalization of a facsimile machine -- for example in parallel to the printing job (printout processing) of the drawing data in a printer, facsimile communication can be performed simultaneously -- can be attained, and it is convenient.

[0003]If it is when it ** and the both sides of the two above-mentioned numerals/decoding circuits are used in the conventional facsimile machine, Even if it performed the operation switch of the purport that set a manuscript to a manuscript stand and the read scans of the manuscript picture are performed, the actual condition was constituted on the grounds that there is already no margin in numerals/decoding circuit so that these instructions might not be received. That is, unless either processing of the printing job of drawing data and facsimile communication is completed thoroughly, or it operates a stop key and processing [which] was compulsorily interrupted for the former on the way (error), the real line command of the read scans of a manuscript picture was not received.

[0004]

[Problem(s) to be Solved by the Invention]When the both sides of the printing job of drawing data and facsimile communication are performed [the above-mentioned conventional thing], in order to perform transmission reservation, A user needs to wait until all the pages of the drawing data under printing will be printed or facsimile communication is completed, and a user cannot operate transmission reservation at an early stage. As a result, a user will spend useless waiting time and had produced inconvenience at this point.

[0005]Even if this invention is in the situation where it was proposed in view of the above-mentioned point, a printing job and facsimile communication processing of drawing data are performed simultaneously, and the both sides of two numerals/decoding means are used, It sets it as the purpose to enable it to perform the read scans of the manuscript picture for transmission reservation etc. at an early stage, to have them, and to make user-friendliness of a facsimile machine good.

[0006]

[Means for Solving the Problem]To achieve the above objects, a facsimile machine concerning proposed this invention according to claim 1, When numerals of drawing data or decryption by which facsimile communication is carried out to decryption of drawing data which is the facsimile machine provided with two numerals/decoding means, and is transmitted to a printer control part by these numerals / decoding means is made simultaneously and a reading request of a manuscript picture occurs, It has a control means which controls an image reading part in order to make read scans of a manuscript picture start, when printing of a page or either of the facsimile communications is completed in the middle of printing.

[0007]A facsimile machine concerning this invention according to claim 2, In composition of above-mentioned claim 1, said control means, When numerals or decoding processing is made on both sides of two numerals/decoding means and an operation switch which directs transmission reservation occurs, Data of contents directed by this operation switch is memorized to a memory measure, and when printing or facsimile communication of a page is completed in the middle of printing, it is constituted so that motion control of contents memorized previously may be performed.

[0008]A facsimile machine concerning this invention according to claim 3, In composition of above-mentioned claim 2, said control means, When transmission reservation is directed by an operation switch, Memory transmission which carries out facsimile transmission of the drawing data once it stores up drawing data of a manuscript picture acquired by carrying out read scans by an image reading part in an image memory, Or it is constituted so that control which performs any of scanner transmission which carries out facsimile transmission of the drawing data at the time of read scans of a manuscript picture they are may be performed.

[0009]

[Function]In the facsimile machine concerning this invention according to claim 1 characterized by the above-mentioned composition. If the reading request of a manuscript picture occurs when the numerals of drawing data or decryption by which facsimile communication is carried out to decryption of the drawing data transmitted to a printer control part by two numerals/decoding means is made simultaneously, A control means is controlled after that to operate an image reading part at any the time of printing of the drawing data of a page being completed in the middle of printing by which the printing job is carried out, or at the time of facsimile communication being completed, or the stage of the earlier one, and to make the read scans of a manuscript picture start. Therefore, it can start at the early stage before completing the printing job of all the pages of drawing data, and the read scans of a manuscript picture can shorten time for a user to wait. Since the printing job of drawing data is once terminated when a page is completed in the middle of printing, when making the printing job resume after that, what is necessary will be just to make a printing job start from the head of the next new page, and the printing job can be performed smoothly.

[0010]In the facsimile machine concerning this invention according to claim 2, when two numerals/decoding means are used and the operation switch which directs transmission reservation occurs, the data of the contents directed by this operation is memorized by the memory measure. And after it is completed after that in the middle of printing printing of the drawing data of a page or any of facsimile communication they are, a control means starts the control which performs operation of the contents previously memorized by the memory measure at the time. After waiting for the end of the printing job of drawing data, or the end of facsimile communication processing, it becomes unnecessary therefore, to perform as a user the operation switch which directs transmission reservation. While the user is made

[the printing job of drawing data and the both sides of facsimile communication], after performing the operation switch of transmission reservation, it becomes possible to separate from this facsimile machine promptly.

[0011]In the facsimile machine concerning this invention according to claim 3, if it points to transmission reservation by the operation switch, it will be performed any of memory transmission and scanner transmission they are.

[0012]

[Example]Hereafter, one example of this invention is described with reference to drawings. Drawing 1 is a block diagram showing an example of the hard structure of facsimile machine F concerning this invention. The main control part 1 (equivalent to the control means of this invention) which comprised a CPU etc. in which this facsimile machine F performs the operation processing and signal processing of each part, Two the numerals / decoding circuits 3a for performing coding or decoding processing of the facsimile communication control 2 for performing facsimile communication through the communication line L, and drawing data, The image memory 4 grade for storing 3b and the drawing data used as a facsimile transmission object, and the drawing data that carried out facsimile reception is provided. The image reading part 5 for carrying out the read scans of the manuscript picture ***** [except these], the printer control part 6a which controls the printer 6, Storage parts store 9 grades which function as the indicator 7 which comprised a liquid crystal display for carrying out a screen display of a desired character, a number, etc., etc., the operation input section 8 provided with various kinds of operation switches, and a system memory, such as ROM9a and RAM9b, are also connected and provided in said main control part 1.

[0013]Among the above two numerals / decoding circuits 3a and 3b, It can change to the image reading part 5 via the switch S2, and can connect freely so that coding processing of the drawing data produced by carrying out read scans by the image reading part 5 can be performed, It can change to the facsimile communication control 2 via the switch S1, and can connect freely so that the coding or decoding processing of drawing data which is facsimile-transmitted or is received by the facsimile communication control 2 can be performed. It is constituted so that the drawing data which the image memory 4 was connected to the both sides of two numerals / decoding circuits 3a and 3b, and stored in the image memory 4 the drawing data which carried out coding processing, or was read from the image memory 4 can be decrypted. The printer control part 6a is connected to one numerals / decoding circuit 3b, and it is constituted so that the drawing data decrypted in this numerals / decoding circuit 3b may be printed by the recording form with the printer 6 (printout).

[0014]Next, it combines with the concrete control action of the main control part 1, and the example of use of facsimile machine F of the above-mentioned composition and an operation are explained. First, as an example of the operating condition of this facsimile machine F, When making the drawing data (for example, drawing data which carried out memory receiving) read from the image memory 4 print with the printer 6, facsimile transmission may be made from an external facsimile machine to this facsimile machine F. In this case, the drawing data which is read from the image memory 4 and printed with the printer 6 is decrypted in one numerals / decoding circuit 3b, and after the drawing data received by the facsimile communication control 2 is decrypted in the numerals / decoding circuit 3a of another side, it is stored in the image memory 4. Therefore, both two numerals and / decoding circuits 3a and 3b are in an operating state.

[0015]Even if it is in the midst of two numerals / the decoding circuits 3a and 3b operating as mentioned

above, as a user, there is a case where he would like to perform facsimile transmission of a desired manuscript. What is necessary is just to perform the predetermined operation switch which directs transmission reservation, after a user sets a desired manuscript to a manuscript stand in this case. What is necessary is to input the facsimile number of the other party who becomes a transmission destination, for example as this concrete operation switch, and just to operate a start key. The data of a facsimile number etc. inputted by this operation switch is stored in the storage parts store 9 by the main control part 1, and is memorized. If it constitutes so that a message, such as "press the start key when you carry out transmission reservation although it is [circuit] under use", may be displayed on the indicator 7, for example when a manuscript is set to a manuscript stand, for a user, it becomes easy to understand operation of facsimile machine F, and is desirable.

[0016]Subsequently, to the printer control part 6a, when the above-mentioned operation switch is completed and the both sides of the printing job and facsimile reception operation in the printer 6 are still continuing, the main control part 1 orders it to interrupt the printing job temporarily, when printing of a page is completed in the middle of printing. As a result, the printer 6 interrupts the printing, when printing of the drawing data of a page is completed in the middle of the printing. The numerals / decoding circuit 3b which is one side by this will be in idle status.

[0017]Then, when the print operation of said printer 6 is interrupted, the main control part 1 operates the image reading part 5, and makes the read scans of the manuscript picture set to the manuscript stand start. Therefore, the read scans of a manuscript picture can be started early rather than printing of the drawing data of all the pages is completed in the printer 6. However, when facsimile reception is previously completed rather than printing of a page is completed in the middle of printing, when the facsimile reception is completed, the image reading part 5 is operated, and the read scans of a manuscript picture are made to start. If there is end time of facsimile reception rather than the printing discontinuation stage of the printer 6 in the case of the point, the direction of the numerals / decoding circuit 3a of another side will be in idle status previously. Since it becomes unnecessary to interrupt the printing job of the drawing data in the printer 6 on the way when facsimile reception is completed previously in this way, the main control part 1 does not interrupt the printing job in the printer 6 in this case.

[0018]The drawing data of the manuscript picture by which read scans are carried out is transmitted to any which are in idle status among two numerals / decoding circuits 3a and 3b, or one side by the image reading part 5, and is coded. And the main control part 1 makes this coded drawing data store in the image memory 4, and is taken as the waiting state of memory transmission. However, when facsimile reception is already completed and the communication line L has become idle status, each part is controlled to make said drawing data transmit to the facsimile communication control 2, and to perform scanner transmission. What is necessary is just to make execution of the memory transmission start, when scanner transmission is not performed, but it is considered as the waiting state of memory transmission and the facsimile reception currently performed previously is completed. Even if it is which [of these memory transmission and scanner transmission] case, the data of a transmission partner's facsimile number etc. which are stored in the storage parts store 9 is referred to.

[0019]After storing a manuscript picture in the image memory 4 as mentioned above or completing the scanner transmission, the main control part 1 makes the printing job of the printer 6 interrupted previously resume. The main control part 1 reads the drawing data of the leading page of an unsettled page from the image memory 4, and makes this transmit to numerals / decoding circuit 3b when

resuming this printing job. Therefore, only the drawing data of an unsettled page will be printed with the printer 6.

[0020]Steps 100-114 of the flow chart of drawing 2 show a series of above-mentioned operation procedures of the main control part 1 of facsimile machine F. A user does not need to be in this facsimile machine F side any longer, after performing the operation switch of Step 101. If it is idle status any of two numerals / decoding circuits 3a and 3b they are when a manuscript is set to a manuscript stand and the operation switch of transmission reservation is performed, as shown in Step 114, it will usually pass, the image reading part 5 will operate promptly, the read scans will be performed, and the coding processing will be made.

[0021]In the above-mentioned example, when printing and facsimile reception of drawing data which carried out memory receiving were made simultaneously, the case where transmission reservation was performed was explained as an example, but this invention is not this-limited. As printing of the drawing data in a printer, also when the communication management report and the telephone number list are being printed, for example, it is contained.

[0022]As a case where both two numerals and / decoding circuits 3a and 3b become under use, As except the above-mentioned example, when memory receiving is being performed at the time of printer operation, memory transmission may be performed at the time of printer operation, and transmission reservation can be performed, without keeping a user waiting for a long time like the example which was described above by this invention in any [of these] case.

[0023]In the above-mentioned example, when the predetermined operation switch was made, the case where it constituted so that it may become the attitudes (interruption process of printer operation, etc.) of transmission reservation was explained, but this invention is not limited to this. For example, when a manuscript is set to the manuscript stand of the image reading part 5, the interruption process of the printer 6 may be made to be started. Since interruption process instructions of the printer 6 can be performed at the stage before a user performs an operation switch if constituted in this way, the advantage that it can shift to the read scans of a request manuscript early more is acquired.

[0024]

[Effect of the Invention]According to the facsimile machine concerning this invention according to claim 1 to 3, so that I may be understood from the above explanation. Even if it is in the situation where a printing job and facsimile communication processing of drawing data are performed simultaneously, and the both sides of two numerals/decoding means are used, Unlike the former, there is no necessity that a user waits until printing of all the pages of drawing data is completed, the read scans of the manuscript picture for transmission reservation etc. can be performed at an early stage, and the exceptional effect that the user-friendliness can be made good is acquired.

[0025]Especially, according to this invention according to claim 2, after waiting for the end of the printing job of drawing data, or the end of facsimile communication processing, it becomes unnecessary to perform the operation switch of transmission reservation, and a user, Even if it is in the midst of the printing job of drawing data and facsimile communication processing being made simultaneously, it becomes possible to perform the operation switch of transmission reservation and to separate from this facsimile machine promptly, and the advantage that that user-friendliness can be made much more good is acquired.

[0026]According to this invention according to claim 3, memory transmission is carried out to the desired other party by transmission reservation, or scanner transmission can be performed, and it is

convenient.

[Translation done.]